APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,260	06/26/2003	Ramarathnam Venkatesan	MS1-1043US	8086

22801   7590   01/22/2008

LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER
SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
2134	

MAIL DATE	DELIVERY MODE
01/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/609,260	VENKATESAN ET AL.
	Examiner	Art Unit	
	Michael J. Simitoski	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 November 2007*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-73* is/are pending in the application.

  4a) Of the above claim(s) *48-73* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-49* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *23 June 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☐ All   b) ☐ Some * c) ☐ None of:

  1. ☐ Certified copies of the priority documents have been received.

  2. ☐ Certified copies of the priority documents have been received in Application No. _____.

  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/16/07*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1. The IDS and response of 11/16/2007 were received and considered.

2. Claims 1-73 are pending.

3. Claims 48-73 are withdrawn.

Response to Arguments

4. Applicant's arguments filed 11/16/2007 have been fully considered but they are not persuasive. The previous objections to the claims are withdrawn.

5. Applicant's response (pp. 22-29) asserts that Boneh fails to teach the use of hyper-elliptic curves of genus 3 or greater or higher because Boneh states that it is an open problem whether one can build a family of hyper-elliptic curves of genus 3 that would give short signatures with higher security. However, based on the statement by Boneh, it is clear that Boneh anticipates the use of hyper-elliptic curves of genus 3 or greater, but suggests that the open problem is to use it to make short signatures with higher security. Therefore, the procedure of using these curves is disclosed.

6. Applicant's response (pp. 22-29) asserts that Boneh also fails to disclose selecting the curve from a family of curves and that Boneh fails to teach "generating logic that encrypts data based on a Jacobian of a curve within a family of curves, said Jacobian having a genus exceeding two". However, Boneh discloses a signature scheme based on the curves of genus 3 ($y^2 = x^3 + 2x \pm 1$ over F_{3^l}, p. 519, §3.2, lines 1-3) where the curve is a curve within a family of curves (the family of curves meeting $y^2 = x^3 + 2x \pm 1$, p. 519, §3.2, lines 1-3).

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this
> country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1-7 & 36-41 are rejected under 35 U.S.C. 102(b) as being anticipated by *"Short Signatures*

from the Weil Pairing" by Boneh et al. (**Boneh**), published December 9-13, 2001.

Regarding claim 1, Boneh discloses identifying data to be signed (message M, p. 516, §2.2,

Signing & p. 524, §3.5, Signing), establishing parameter data (base group G, generator g, §2.2, ¶1) for

use with signature generating logic (GDH signature scheme, p. 516) that encrypts data (h^x, p. 516,

Signing) based on a Jacobian of a curve (p. 517, §3, ¶1) & p. 525, ¶3) within a family of curves (the family

of curves meeting $y^2 = x^3 + 2x \pm 1$, p. 519, §3.2, lines 1-3) having a genus exceeding two (genus 3,

$y^2 = x^3 + 2x \pm 1$ over F_{3^l}, p. 519, §3.2, lines 1-3 & p. 525, ¶3), said parameter data causing said

signature generating logic to select at least one Gap Diffie-Hellman (GDH) group of elements (p. 516, last

paragraph & p. 517, §3, ¶1) relating to said curve within a family of curves (the family of curves meeting

$y^2 = x^3 + 2x \pm 1$, p. 519, §3.2, lines 1-3), determining private key data (x, p. 516, Key generation) and

corresponding public key data (v, p. 516, Key generation) using said signature generating logic (GDH

signature scheme, §2.2), and signing said identified data (M) with said private key data (h^x, p. 516,

Signing) using said signature generating logic (GDH signature scheme) to create a corresponding digital

signature (σ, p. 516, Signing).

Regarding claim 2, Boneh discloses wherein said identified data includes a message

$m \in \{0,1\}*$ (p. 516, §2.2, Signing).

Regarding claim 3, Boneh discloses wherein said parameter data establishes a base group G and a generator g as system parameters (§2.2, ¶1) for said signature generating logic (GDH signature scheme, §2.2, ¶1).

Regarding claim 4, Boneh discloses wherein determining said private key data and said public key data includes picking $x \xleftarrow{R} Z^{*}_{p}$ (p. 516, Key generation) and computing $v \leftarrow g^{x}$ (p. 516, Key generation), wherein said public key data includes v and said private key data includes x (p. 516, Key generation).

Regarding claim 5, Boneh discloses wherein signing said identified data (M) with said private key data (x) using said signature generating logic (GDH signature scheme) further includes determining $h \leftarrow h(m)$, and $\sigma \leftarrow h^{x}$, using at least one hash function (p. 516, Signing), said private key data x and said message m (p. 516, Signing), wherein said digital signature includes σ (p. 516, Signing).

Regarding claim 6, Boneh discloses wherein said hash function includes a full-domain hash function (p. 516, §2.2, ¶2).

Regarding claim 7, Boneh discloses wherein said hash function (p. 520, §3.3, ¶2) includes a hash function $h': \{0,1\}^{*} \rightarrow G \cup \{\perp\}$ that outputs an element of G or $\perp$ indicating a failure (p. 521, MapToGroup, step 3b; outputs P_{M}, an element of G or increments and repeats, or eventually reports a failure).

Regarding claim 36, Boneh discloses receiving message data (M) and a corresponding digital signature (σ) and public key data (v=public key, G=group system parameter, g=generator, i.e. given V, M, σ, G, h and g, p. 516, §2.2, Verification), using parameter data (G and g) to configure signature verifying logic (GDH signature scheme, p. 516, Verification) that performs cryptography operations (verification) based on a Jacobian of a curve (p. 517, §3, ¶1 & p. 525, ¶3) within a family of curves (the

family of curves meeting $y^2 = x^3 + 2x \pm 1$, p. 519, §3.2, lines 1-3), said Jacobian having a genus greater

than two (genus 3, $y^2 = x^3 + 2x \pm 1$ over F_{3^l}, p. 519, §3.2, lines 1-3 & p. 525, ¶3), said parameter data

(G and g) causing said signature verifying logic to select at least one Gap Diffie-Hellman (GDH) group of

elements relating to said curve (system parameter G and generator g; note that the signature σ is an

element of G) within a family of curves (the family of curves meeting $y^2 = x^3 + 2x \pm 1$, p. 519, §3.2,

lines 1-3), and with said signature verifying logic (GDH signature scheme), determining if said digital

signature is valid (p. 516, §2.2, Verification) using said public key (v) and said message data (M) (p. 516,

§2.2, Verification.

Regarding claim 37, Boneh discloses wherein said message data includes a message

$m \in \{0,1\} *$ (p. 516, §2.2, Signing).

Regarding claim 38, Boneh discloses wherein said parameter data establishes a base group G

and a generator g as system parameters (§2.2, ¶1) for said signature generating logic (GDH signature

scheme, §2.2, ¶1).

Regarding claim 39, Boneh discloses wherein said public key data (v) includes public key data v

(p. 516, Key generation), said digital signature includes signature σ (p. 516, Key generation) and

determining if said digital signature is valid further includes determining $h \leftarrow h(m)$ using at least one

hash function (p. 516, Verification) and verifying that (g, v, h, σ) is a valid Gap Diffie-Hellman tuple (p.

516, Verification).

Regarding claim 40, Boneh discloses wherein said hash function includes a full-domain hash

function (p. 516, §2.2, ¶2).

Regarding claim 41, Boneh discloses wherein said hash function (p. 520, §3.3, ¶2) includes a

hash function $h': \{0,1\} * \rightarrow G \cup \{\perp\}$ that outputs an element of G or $\perp$ indicating a failure (p. 521,

MapToGroup, step 3b; outputs P_M, an element of G or increments and repeats, or eventually reports a

failure).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 13-19, 24-30 & 42-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Boneh in view of what is well known in the art.

Regarding claim 13, the claim is substantially equivalent to claim 1 with the exception that it

recites a computer-readable medium with instructions for causing at least one processing unit to

perform the method. However, it is well known in the art of computers and cryptography to automate

algorithms using computer instructions that cause at least one processing unit to carry out the algorithm

(method). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify Boneh to embody the method disclosed in executable instructions

embodied on a computer-readable medium for causing at least one processing unit to execute the

instructions. One of ordinary skill in the art would have been motivated to perform such a modification

to automate the algorithm, as is well known in the art.

Regarding claim 14, Boneh discloses wherein said identified data includes a message

$m \in \{0,1\} *$ (p. 516, §2.2, Signing).

Regarding claim 15, Boneh discloses wherein said parameter data establishes a base group G

and a generator g as system parameters (§2.2, ¶1) for said signature generating logic (GDH signature

scheme, §2.2, ¶1).

Regarding claim 16, Boneh discloses wherein determining said private key data and said public

key data includes picking $x \xleftarrow{R} Z^*_p$ (p. 516, Key generation) and computing $v \leftarrow g^x$ (p. 516, Key

generation), wherein said public key data includes v and said private key data includes x (p. 516, Key

generation).

Regarding claim 17, Boneh discloses wherein signing said identified data (M) with said private

key data (x) using said signature generating logic (GDH signature scheme) further includes determining

$h \leftarrow h(m)$, and $\sigma \leftarrow h^x$, using at least one hash function (p. 516, Signing), said private key data x and

said message m (p. 516, Signing), wherein said digital signature includes σ (p. 516, Signing).

Regarding claim 18, Boneh discloses wherein said hash function includes a full-domain hash

function (p. 516, §2.2, ¶2).

Regarding claim 19, Boneh discloses wherein said hash function (p. 520, §3.3, ¶2) includes a

hash function $h': \{0,1\}^* \rightarrow G \cup \{\perp\}$ that outputs an element of G or $\perp$ indicating a failure (p. 521,

MapToGroup, step 3b; outputs P_M, an element of G or increments and repeats, or eventually reports a

failure).

Regarding claim 24, the claim is substantially equivalent to claim 1 with the exception that it

recites an apparatus that performs the method and comprises memory configured to store identifying

data that is to be signed. However, it is well known in the art of computers and cryptography to

automate algorithms using computers to carry out the algorithm (method) and that computers use

memory to store data to be operated upon. Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify Boneh to embody the method

disclosed therein in an apparatus to generate the keys and sign the data, comprising memory configured

to store identifying data that is to be signed. One of ordinary skill in the art would have been motivated

to perform such a modification to automate the algorithm, as is well known in the art.

Regarding claim 25, Boneh discloses wherein said identified data includes a message

$m \in \{0,1\}*$ (p. 516, §2.2, Signing).

Regarding claim 26, Boneh discloses wherein said parameter data establishes a base group G

and a generator g as system parameters (§2.2, ¶1) for said signature generating logic (GDH signature

scheme, §2.2, ¶1).

Regarding claim 27, Boneh discloses wherein determining said private key data and said public

key data includes picking $x \xleftarrow{R} Z^*_p$ (p. 516, Key generation) and computing $v \leftarrow g^x$ (p. 516, Key

generation), wherein said public key data includes v and said private key data includes x (p. 516, Key

generation).

Regarding claim 28, Boneh discloses wherein signing said identified data (M) using said private

key data (x) using said signature generating logic (GDH signature scheme) further includes determining

$h \leftarrow h(m)$, and $\sigma \leftarrow h^x$, using at least one hash function (p. 516, Signing), said private key data x and

said message m (p. 516, Signing), wherein said digital signature includes σ (p. 516, Signing).

Regarding claim 29, Boneh discloses wherein said hash function includes a full-domain hash

function (p. 516, §2.2, ¶2).

Regarding claim 30, Boneh discloses wherein said hash function (p. 520, §3.3, ¶2) includes a

hash function $h': \{0,1\}* \rightarrow G \cup \{\perp\}$ that outputs an element of G or $\perp$ indicating a failure (p. 521,

MapToGroup, step 3b; outputs P_M, an element of G or increments and repeats, or eventually reports a failure).

Regarding claim 42, the claim is substantially equivalent to claim 36 with the exception that it recites a computer-readable medium with instructions for causing at least one processing unit to perform the method. However, it is well known in the art of computers and cryptography to automate algorithms using computer instructions that cause at least one processing unit to carry out the algorithm (method). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boneh to embody the method disclosed in executable instructions embodied on a computer-readable medium for causing at least one processing unit to execute the instructions. One of ordinary skill in the art would have been motivated to perform such a modification to automate the algorithm, as is well known in the art.

Regarding claim 43, Boneh discloses wherein said message·data includes a message $m \in \{0,1\}*$ (p. 516, §2.2, Signing).

Regarding claim 44, Boneh discloses wherein said parameter data establishes a base group G and a generator g as system parameters (§2.2, ¶1) for said signature generating logic (GDH signature scheme, §2.2, ¶1).

Regarding claim 45, Boneh discloses wherein said public key data (v) includes public key data v (p. 516, Key generation), said digital signature includes signature σ (p. 516, Key generation) and determining if said digital signature is valid further includes determining $h \leftarrow h(m)$ using at least one hash function (p. 516, Verification) and verifying that (g, v, h, σ) is a valid Gap Diffie-Hellman tuple (p. 516, Verification).

Regarding claim 46, Boneh discloses wherein said hash function includes a full-domain hash function (p. 516, §2.2, ¶2).

Regarding claim 47, Boneh discloses wherein said hash function (p. 520, §3.3, ¶2) includes a hash function $h': \{0,1\}^* \rightarrow G \cup \{\perp\}$ that outputs an element of G or $\perp$ indicating a failure (p. 521, MapToGroup, step 3b; outputs P_M, an element of G or increments and repeats, or eventually reports a failure).

11.   Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Boneh**.

Regarding claim 8, Boneh lacks outputting the digital signature. However, Boneh teaches that digital signatures are used in environments where a human is asked to manually key in the signature provided on a CD label or postage stamp (§1, ¶1). In such a situation, one of ordinary skill in the art understands that the signature on the label must have been created and then outputted to the CD label or postage stamp. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boneh's implementation-generic signature scheme to output the created signature to a CD label or postage stamp. One of ordinary skill in the art would have been motivated to perform such a modification to use the created signature as a postage stamp, as taught by Boneh (§1, ¶1).

Regarding claim 9, Boneh discloses determining if said digital signature is valid using signature verifying logic (GDH signature scheme, Verification, p. 516).

Regarding claim 10, Boneh discloses wherein said signature verification logic (GDH signature scheme) is configured using said parameter data (g and G) and said parameter data establishes base

group G and generator g as system parameters for said signature verifying logic (verification logic is given system parameters and specifically uses g, v, h, σ, p. 516, §2.2, verification).

Regarding claim 11, Boneh discloses wherein said public key data (v) includes public key data v (p. 516, Key generation), said identified data includes a message m, said digital signature includes signature σ (p. 516, Key generation) and determining if said digital signature is valid further includes determining $h \leftarrow h(m)$ using at least one hash function (p. 516, Verification) and verifying that (g, v, h, σ) is a valid Gap Diffie-Hellman tuple (p. 516, Verification).

Regarding claim 12, Boneh lacks wherein the signature is included in a product ID. However, Boneh teaches that digital signatures are used in environments where a human is asked to manually key in the signature provided on a CD label (§1, ¶1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boneh's implementation-generic signature scheme to include the created signature in a product ID (CD label). One of ordinary skill in the art would have been motivated to perform such a modification to use the created signature for product registration, as taught by Boneh (§1, ¶1).

12. Claims 20-23 & 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Boneh**, as modified above with respect to claims 13 & 24.

Regarding claim 20, Boneh lacks outputting the digital signature. However, Boneh teaches that digital signatures are used in environments where a human is asked to manually key in the signature provided on a CD label or postage stamp (§1, ¶1). In such a situation, one of ordinary skill in the art understands that the signature on the label must have been created and then outputted to the CD label or postage stamp. Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify Boneh's implementation-generic signature scheme to output

the created signature to a CD label or postage stamp. One of ordinary skill in the art would have been

motivated to perform such a modification to use the created signature as a postage stamp, as taught by

Boneh (§1, ¶1).

Regarding claim 21, Boneh discloses determining if said digital signature is valid using signature

verifying logic (GDH signature scheme, Verification, p. 516).

Regarding claim 22, Boneh discloses wherein said signature verification logic (GDH signature

scheme) is configured using said parameter data (g and G) and said parameter data establishes base

group G and generator g as system parameters for said signature verifying logic (verification logic is

given system parameters and specifically uses g, v, h, σ, p. 516, §2.2, verification).

Regarding claim 23, Boneh discloses wherein said public key data (v) includes public key data v

(p. 516, Key generation), said identified data includes a message m, said digital signature includes

signature σ (p. 516, Key generation) and determining if said digital signature is valid further includes

determining $h \leftarrow h(m)$ using at least one hash function (p. 516, Verification) and verifying that (g, v, h,

σ) is a valid Gap Diffie-Hellman tuple (p. 516, Verification).

Regarding claim 31, Boneh lacks outputting the digital signature. However, Boneh teaches that

digital signatures are used in environments where a human is asked to manually key in the signature

provided on a CD label or postage stamp (§1, ¶1). In such a situation, one of ordinary skill in the art

understands that the signature on the label must have been created and then outputted to the CD label

or postage stamp. Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify Boneh's implementation-generic signature scheme to output

the created signature to a CD label or postage stamp. One of ordinary skill in the art would have been

motivated to perform such a modification to use the created signature as a postage stamp, as taught by Boneh (§1, ¶1).

Regarding claim 32, Boneh discloses determining if said digital signature is valid using signature verifying logic (GDH signature scheme, Verification, p. 516).

Regarding claim 33, Boneh discloses wherein said signature verification logic (GDH signature scheme) is configured using said parameter data (g and G) and said parameter data establishes base group G and generator g as system parameters for said signature verifying logic (verification logic is given system parameters and specifically uses g, v, h, σ, p. 516, §2.2, verification).

Regarding claim 34, Boneh discloses wherein said public key data (v) includes public key data v (p. 516, Key generation), said identified data includes a message m, said digital signature includes signature σ (p. 516, Key generation) and determining if said digital signature is valid further includes determining $h \leftarrow h(m)$ using at least one hash function (p. 516, Verification) and verifying that (g, v, h, σ) is a valid Gap Diffie-Hellman tuple (p. 516, Verification).

Regarding claim 35, Boneh lacks wherein the signature is included in a product ID. However, Boneh teaches that digital signatures are used in environments where a human is asked to manually key in the signature provided on a CD label (§1, ¶1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boneh's implementation-generic signature scheme to include the created signature in a product ID (CD label). One of ordinary skill in the art would have been motivated to perform such a modification to use the created signature for product registration, as taught by Boneh (§1, ¶1).

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this·Office

action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the

extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

date of the advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner

can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this

application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer

Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR

CANADA) or 571-272-1000.

KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER

January 14, 2008
MJS
/MJS/